PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PPC 70126/WO	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/GB 03/04612	International filing date *(day/month/year)* 27.10.2003	Priority date *(day/month/year)* 26.11.2002
International Patent Classification (IPC) or both national classification and IPC A01N39/04		
Applicant SYNGENTA LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 9 sheets.

3. This report contains indications relating to the following items:

   - I ☒ Basis of the opinion
   - II ☐ Priority
   - III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
   - IV ☐ Lack of unity of invention
   - V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
   - VI ☐ Certain documents cited
   - VII ☐ Certain defects in the international application
   - VIII ☐ Certain observations on the international application

Date of submission of the demand	Date of completion of this report
25.05.2004	05.11.2004
Name and mailing address of the international preliminary examining authority: European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized Officer Bertrand, F Telephone No. +49 89 2399-8606

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB 03/04612

I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17))*:

Description, Pages

1-48 as originally filed

Claims, Numbers

1-14 filed with telefax on 21.10.2004

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☒ the claims, Nos.: 14,15
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

~~6. Additional observations, if necessary:~~

see separate sheet

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	1-9,11-14
	No:	Claims	10
Inventive step (IS)	Yes:	Claims	1-9,11-14
	No:	Claims	10
Industrial applicability (IA)	Yes:	Claims	1-14
	No:	Claims	

2. Citations and explanations

see separate sheet

Re Item I
Basis of the report

The documents mentioned in this International Preliminary Examination Report are numbered in accordance with the order they appear in the International Search Report.

The amendments filed by the Applicant on the 21.10.2004 comply with Article 34(2)(b) PCT insofar as they do not introduce any subject-matter which extends beyond the application as originally filed. They are thus admissible.

Re Item V
Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

The present invention relates to plant fungicides.

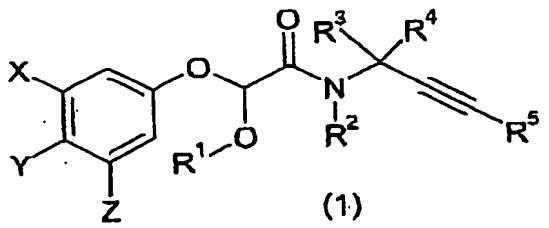
D3 describes a compound which corresponds to the general formula of the present claims, but is excluded therefrom by a proviso. D3 mentions a different (herbicidal) activity.

The general formula of D2 overlaps the scope of the present claim 10 and mentions explicitly some examples within the overlap. Hence, one skilled in the art would have seriously contemplated to prepare any compound within this overlap, be it for other reasons (D2 relates to miticides). The exclusion of only the specific examples from the present claims is therefore not sufficient to establish novelty. Rather, the whole overlap should not be claimed. The fact that one skilled in the art would have prepared other compounds within the overlap for an other reason/use is irrelevant as long as he clearly would have done so. Therefore the subject-matter of the present claim 10 is not new with respect to D2 (art.33(2)PCT).

D1 is the only document relating to mildewicides with a close though not overlapping structure. D1 does not anticipate the present claims. One skilled in the art expects similar properties from similar compounds. In the present case, a certain degree of fungicidal activity was predictable. However, the comparative data provided show an unexpectedly higher activity for compound 3 according to the present invention with respect to compound 8 of D1. Hence, the present invention is regarded as involving an inventive step (art.33(3)PCT), provided the lack of novelty as outlined above is overcome.

CLAIMS

1. The use as a plant fungicide of a compound of the general formula (1):



(1)

wherein

X, Y and Z are independently H, halogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{2-4} alkenyl, halo(C_{2-4})alkenyl, C_{2-4} alkynyl, halo(C_{2-4})alkynyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy, -S(O)$_n$(C_{1-4})alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO_2(C_{1-4})alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C_{1-4} alkoxycarbonyl, -CONR'R", -COR', -NR'COR" or -NR'COOR'" where R' and R" are independently H or C_{1-4} alkyl and R'" is C_{1-4} alkyl, provided that at least one of X and Z is other than H;

R^1 is a straight-chain C_{1-4} alkyl group;

R^2 is H, C_{1-4} alkyl, C_{1-4} alkoxymethyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C_{1-4} alkoxy;

R^3 and R^4 are independently H, C_{1-3} alkyl, C_{2-3} alkenyl or C_{2-3} alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R^3 and R^4 join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C_{1-4} alkyl; and

R^5 is H, C_{1-4} alkyl or C_{3-6} cycloalkyl in which the alkyl or cycloalkyl group is optionally substituted with halo, hydroxy, C_{1-6} alkoxy, cyano, C_{1-4} alkylcarbonyl-oxy, aminocarbonyloxy, mono- or di(C_{1-4})alkylaminocarbonyloxy, -S(O)$_n$(C_{1-6})-alkyl where n is 0, 1 or 2, triazolyl, tri(C_{1-4})-alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, or

R^5 is optionally substituted phenyl, optionally substituted thienyl or optionally

substituted benzyl,

in which the optionally substituted phenyl and thienyl rings of the R^5 values are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxy, C_{2-4} alkenyloxy, C_{2-4} alkynyloxy, halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, halo(C_{1-4})alkylthio, hydroxy(C_{1-4})alkyl, C_{1-4} alkoxy(C_{1-4})alkyl, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenoxy, benzyloxy, benzoyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, $-NR^mR^n$, $-NHCOR^m$, $-NHCONR^mR^n$, $-CONR^mR^n$, $-SO_2R^m$, $-OSO_2R^m$, $-COR^m$, $-CR^m{=}NR^n$ or $-N{=}CR^mR^n$, in which R^m and R^n are independently hydrogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{1-4} alkoxy, halo-(C_{1-4})alkoxy, C_{1-4} alkylthio, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C_{1-4} alkyl or C_{1-4} alkoxy.

2. The use as a plant fungicide of a compound of the general formula (1) according to claim 1 wherein X, Y and Z are all chloro or methyl, or X and Z are both chloro or bromo and Y is H or methyl, or X and Z are both methyl or methoxy and Y is H, chloro, bromo or alkylthio, or X is methoxy, Y is H and Z is cyano or chloro, or X is methyl, Y is H and Z is ethyl, or X is chloro, bromo or trifluoromethyl and both Y and Z are H.

3. The use as a plant fungicide of a compound of the general formula (1) according to claim 1 or 2 wherein R^1 is methyl, ethyl, *n*-propyl, or *n*-butyl.

4. The use as a plant fungicide of a compound of the general formula (1) according to claim 1 or 2 wherein R^1 is methyl or ethyl.

5. The use as a plant fungicide of a compound of the general formula (1) according to any one of the preceding claims wherein R^2 is H.

6. The use as a plant fungicide of a compound of the general formula (1) according to any one of the preceding claims wherein both R^3 and R^4 are methyl.

7. The use as a plant fungicide of a compound of the general formula (1) according to any one of the preceding claims wherein R^5 is H, methyl, hydroxymethyl, methoxymethyl, 1-methoxyethyl, *tert*-butyldimethylsilyloxymethyl, 3-cyanopropyl, 3-(1,2,4-triazol-1-yl)propyl, 3-methylthiopropyl, 3-methanesulphinylpropyl or 3-methanesulphonylpropyl.

8. The use as a plant fungicide of a compound of the general formula (1) according to claim 1 wherein

X, Y and Z are independently H, halogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{2-4} alkenyl, halo(C_{2-4})alkenyl, C_{2-4} alkynyl, halo(C_{2-4})alkynyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy, -$S(O)_n$(C_{1-4})alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO_2(C_{1-4})alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C_{1-4} alkoxycarbonyl, -CONR'R", -COR' or -NR'COR" where R' and R" are independently H or C_{1-4} alkyl, provided that at least one of X and Z is other than H;

R^1 is a straight-chain C_{1-4} alkyl group;

R^2 is H, C_{1-4} alkyl, C_{1-4} alkoxymethyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C_{1-4} alkoxy;

R^3 and R^4 are independently H, C_{1-3} alkyl, C_{2-3} alkenyl or C_{2-3} alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R^3 and R^4 join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C_{1-4} alkyl; and

R^5 is H, C_{1-4} alkyl or C_{3-6} cycloalkyl in which the alkyl or cycloalkyl group is optionally substituted with halo, hydroxy, C_{1-6} alkoxy, C_{1-6} alkylthio, cyano, C_{1-4} alkylcarbonyloxy, aminocarbonyloxy or mono- or di(C_{1-4})alkylaminocarbonyloxy, tri(C_{1-4})-alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, or

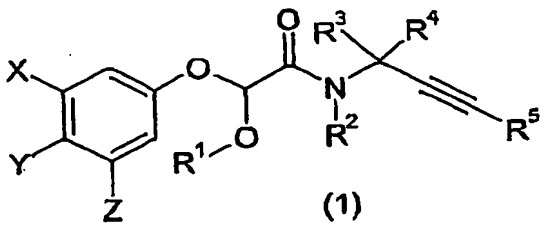
R^5 is optionally substituted phenyl, optionally substituted thienyl or optionally

substituted benzyl,

in which the optionally substituted phenyl and thienyl rings of the R^5 values are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxy, C_{2-4} alkenyloxy, C_{2-4} alkynyloxy, halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, halo(C_{1-4})alkylthio, hydroxy(C_{1-4})alkyl, C_{1-4} alkoxy(C_{1-4})alkyl, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenoxy, benzyloxy, benzoyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, $-NR^mR^n$, $-NHCOR^m$, $-NHCONR^mR^n$, $-CONR^mR^n$, $-SO_2R^m$, $-OSO_2R^m$, $-COR^m$, $-CR^m{=}NR^n$ or $-N{=}CR^mR^n$, in which R^m and R^n are independently hydrogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{1-4} alkoxy, halo-(C_{1-4})alkoxy, C_{1-4} alkylthio, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C_{1-4} alkyl or C_{1-4} alkoxy.

9. The use as a plant fungicide of a compound of the general formula (1) according to claim 1 wherein X, Y and Z are all chloro or methyl, or X and Z are both chloro or bromo and Y is H or methyl, or X and Z are both methyl or methoxy and Y is H, chloro, bromo or alkylthio, or X is methoxy, Y is H and Z is cyano or chloro, or X is methyl, Y is H and Z is ethyl, or X is chloro, bromo or trifluoromethyl and both Y and Z are H; R^1 is methyl, ethyl, *n*-propyl or *n*-butyl; R^2 is H; R^3 and R^4 are both methyl; and R^5 is H, methyl, hydroxymethyl, methoxymethyl, 1-methoxyethyl, *tert*-butyldimethylsilyloxymethyl, 3-cyanopropyl, 3-(1,2,4-triazol-1-yl)propyl, 3-methylthiopropyl, 3-methanesulphinylpropyl or 3-methanesulphonylpropyl.

10. A compound of the general formula (1):



(1)

wherein

X, Y and Z are independently H, halogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{2-4} alkenyl, halo(C_{2-4})alkenyl, C_{2-4} alkynyl, halo(C_{2-4})alkynyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy, -$S(O)_n$(C_{1-4})alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO_2(C_{1-4})alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C_{1-4} alkoxycarbonyl, -CONR'R", -COR', -NR'COR" or -NR'COOR"' where R' and R" are independently H or C_{1-4} alkyl and R"' is C_{1-4} alkyl, provided that at least one of X and Z is other than H;

R^1 is a straight-chain C_{1-4} alkyl group;

R^2 is H, C_{1-4} alkyl, C_{1-4} alkoxymethyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C_{1-4} alkoxy;

R^3 and R^4 are independently H, C_{1-3} alkyl, C_{2-3} alkenyl or C_{2-3} alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R^3 and R^4 join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C_{1-4} alkyl; and

R^5 is H, C_{1-4} alkyl or C_{3-6} cycloalkyl in which the alkyl or cycloalkyl group is optionally substituted with halo, hydroxy, C_{1-6} alkoxy, cyano, C_{1-4} alkylcarbonyloxy, aminocarbonyloxy, mono- or di(C_{1-4})alkylaminocarbonyloxy, -$S(O)_n$(C_{1-6})-alkyl where n is 0, 1 or 2, triazolyl, tri(C_{1-4})-alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, or

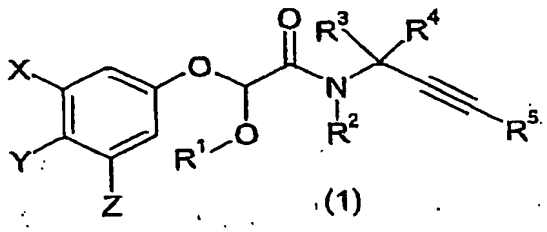
R^5 is optionally substituted phenyl, optionally substituted thienyl or optionally substituted benzyl,

in which the optionally substituted phenyl and thienyl rings of the R^5 values are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxy, C_{2-4} alkenyloxy, C_{2-4} alkynyloxy, halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, halo(C_{1-4})-alkylthio, hydroxy(C_{1-4})alkyl, C_{1-4} alkoxy(C_{1-4})alkyl, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenoxy, benzyloxy, benzoyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, -NR^mR^n, -$NHCOR^m$, -$NHCONR^mR^n$, -$CONR^mR^n$, -SO_2R^m, -OSO_2R^m, -COR^m, -CR^m=NR^n or -N=CR^mR^n, in which R^m and R^n are

independently hydrogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C_{1-4} alkyl or C_{1-4} alkoxy;

provided that R^5 is not H when (i) X, Z, R^1, R^3 and R^4 are all methyl and Y, and R^2 are both H, (ii) X, Z, R^3 and R^4 are all methyl, Y is chloro, R^1 is ethyl and R^2 is H, (iii) X and Z are both chloro, R^1 is methyl or ethyl, R^3 and R^4 are both methyl and Y and R^2 are both H, (iv) X, Y and Z are all chloro, R^1, R^3 and R^4 are all methyl and R^2 is H, and (v) Y is chloro, Z is trifluoromethyl, R^1, R^3 and R^4 are all methyl and X and R^2 are both H.

11. A compound of the general formula (I):



(1)

wherein

X, Y and Z are independently H, fluoro, bromo, iodo, C_{2-4} alkyl, halo(C_{1-4})alkyl, C_{2-4} alkenyl, halo(C_{2-4})alkenyl, C_{2-4} alkynyl, halo(C_{2-4})alkynyl, C_{1-4} alkoxy, halo-(C_{1-4})alkoxy, -$S(O)_n$(C_{1-4})alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, -OSO_2(C_{1-4})alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C_{1-4} alkoxycarbonyl, -CONR'R", -COR', -NR'COR" or -NR'COOR"' where R' and R" are independently H or C_{1-4} alkyl and R"' is C_{1-4} alkyl, provided that at least one of X and Z is other than H;

R^1 is a straight-chain C_{1-4} alkyl group;

R^2 is H, C_{1-4} alkyl, C_{1-4} alkoxymethyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C_{1-4} alkoxy;

R^3 and R^4 are independently H, C_{1-3} alkyl, C_{2-3} alkenyl or C_{2-3} alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R^3 and R^4 join with the carbon atom to which they are attached to form a 3 or 4

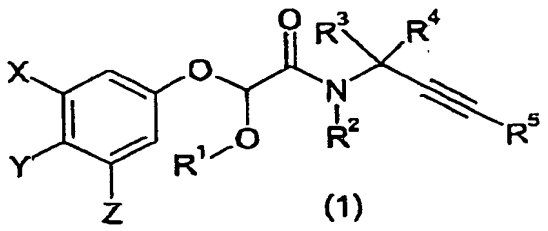
membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C_{1-4} alkyl; and

R^5 is H, C_{1-4} alkyl or C_{3-6} cycloalkyl in which the alkyl or cycloalkyl group is optionally substituted with halo, hydroxy, C_{1-6} alkoxy, cyano, C_{1-4} alkylcarbonyloxy, aminocarbonyloxy, mono- or di(C_{1-4})alkylaminocarbonyloxy, $-S(O)_n(C_{1-6})$-alkyl where n is 0, 1 or 2, triazolyl, tri(C_{1-4})-alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, or

R^5 is optionally substituted phenyl, optionally substituted thienyl or optionally substituted benzyl,

in which the optionally substituted phenyl and thienyl rings of the R^5 values are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxy, C_{2-4} alkenyloxy, C_{2-4} alkynyloxy, halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, halo(C_{1-4})-alkylthio, hydroxy(C_{1-4})alkyl, C_{1-4} alkoxy(C_{1-4})alkyl, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenoxy, benzyloxy, benzoyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, $-NR^mR^n$, $-NHCOR^m$, $-NHCONR^mR^n$, $-CONR^mR^n$, $-SO_2R^m$, $-OSO_2R^m$, $-COR^m$, $-CR^m{=}NR^n$ or $-N{=}CR^mR^n$, in which R^m and R^n are independently hydrogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenyl or benzyl, the phenyl and benzyl groups being optionally substituted with halogen, C_{1-4} alkyl or C_{1-4} alkoxy.

12. A compound of the general formula (1):



(1)

wherein

X, Y and Z are independently H, halogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{2-4} alkenyl, halo(C_{2-4})alkenyl, C_{2-4} alkynyl, halo(C_{2-4})alkynyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy,

$-S(O)_n(C_{1-4})$alkyl where n is 0, 1 or 2 and the alkyl group is optionally substituted with fluoro, $-OSO_2(C_{1-4})$alkyl where the alkyl group is optionally substituted with fluoro, cyano, nitro, C_{1-4} alkoxycarbonyl, -CONR'R", -COR', -NR'COR" or -NR'COOR'" where R' and R" are independently H or C_{1-4} alkyl and R'" is C_{1-4} alkyl, provided that at least one of X and Z is other than H;

R^1 is a straight-chain C_{1-4} alkyl group;

R^2 is H, C_{1-4} alkyl, C_{1-4} alkoxymethyl or benzyloxymethyl in which the phenyl ring of the benzyl moiety is optionally substituted with C_{1-4} alkoxy;

R^3 and R^4 are independently H, C_{1-3} alkyl, C_{2-3} alkenyl or C_{2-3} alkynyl provided that both are not H and that when both are other than H their combined total of carbon atoms does not exceed 4, or

R^3 and R^4 join with the carbon atom to which they are attached to form a 3 or 4 membered carbocyclic ring optionally containing one O, S or N atom and optionally substituted with halo or C_{1-4} alkyl; and

R^5 is C_{1-4} alkyl or C_{3-6} cycloalkyl in which the alkyl or cycloalkyl group is optionally substituted with halo, hydroxy, C_{1-6} alkoxy, cyano, C_{1-4} alkylcarbonyloxy, aminocarbonyloxy, mono- or di(C_{1-4})alkylaminocarbonyloxy, $-S(O)_n(C_{1-6})$-alkyl where n is 0, 1 or 2, triazolyl, tri(C_{1-4})-alkylsilyloxy, optionally substituted phenoxy, optionally substituted thienyloxy, optionally substituted benzyloxy or optionally substituted thienylmethoxy, or

R^5 is optionally substituted phenyl, optionally substituted thienyl or optionally substituted benzyl,

in which the optionally substituted phenyl and thienyl rings of the R^5 values are optionally substituted with one, two or three substituents selected from halo, hydroxy, mercapto, C_{1-4} alkyl, C_{2-4} alkenyl, C_{2-4} alkynyl, C_{1-4} alkoxy, C_{2-4} alkenyloxy, C_{2-4} alkynyloxy, halo(C_{1-4})alkyl, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, halo(C_{1-4})-alkylthio, hydroxy(C_{1-4})alkyl, C_{1-4} alkoxy(C_{1-4})alkyl, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenoxy, benzyloxy, benzoyloxy, cyano, isocyano, thiocyanato, isothiocyanato, nitro, $-NR^mR^n$, $-NHCOR^m$, $-NHCONR^mR^n$, $-CONR^mR^n$, $-SO_2R^m$, $-OSO_2R^m$, $-COR^m$, $-CR^m{=}NR^n$ or $-N{=}CR^mR^n$, in which R^m and R^n are independently hydrogen, C_{1-4} alkyl, halo(C_{1-4})alkyl, C_{1-4} alkoxy, halo(C_{1-4})alkoxy, C_{1-4} alkylthio, C_{3-6} cycloalkyl, C_{3-6} cycloalkyl(C_{1-4})alkyl, phenyl or benzyl, the

phenyl and benzyl groups being optionally substituted with halogen, C_{1-4} alkyl or C_{1-4} alkoxy.

13. A compound according to claim 10 or 12 wherein X, Y and Z are all chloro or methyl, or X and Z are both chloro or bromo and Y is H or methyl, or X and Z are both methyl or methoxy and Y is H, chloro, bromo or alkylthio, or X is methoxy, Y is H and Z is cyano or chloro, or X is methyl, Y is H and Z is ethyl, or X is chloro, bromo or trifluoromethyl and both Y and Z are H; R^1 is methyl, ethyl, *n*-propyl or *n*-butyl; R^2 is H; R^3 and R^4 are both methyl; and R^5 is methyl, hydroxymethyl, methoxymethyl, 1-methoxyethyl, *tert*-butyldimethylsilyloxy-methyl, 3-cyanopropyl, 3-(1,2,4-triazol-1-yl)propyl, 3-methylthiopropyl, 3-methanesulphinylpropyl or 3-methanesulphonylpropyl.

14. A method of combating or controlling phytopathogenic fungi which comprises applying a fungicidally effective amount of a compound of the general formula (1) as defined in claim 1 to a plant, to a seed of a plant, to the locus of the plant or seed or to soil or any other plant growth medium.